

Restoring Fish Passage at Landsburg



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Landsburg Fish Passage Complex

⌘ Seattle's Landsburg diversion dam at RM 21.8 provides 2/3 of the water supply for 1.3 million people; has blocked salmon for over 100 years

⌘ New facilities provide upstream and downstream passage around the dam and aqueduct crossing



Landsburg Fish Passage Facilities



- ⌘ Full operation of the 4 components began September 16, 2003
- ⌘ Re-opens more than 17 miles of high quality stream habitat for chinook, coho and steelhead
- ⌘ Due to public health concerns over large numbers of spawning carcasses in water supply, sockeye not allowed to pass

The Four Components of Fish Passage

⌘ Downstream passage

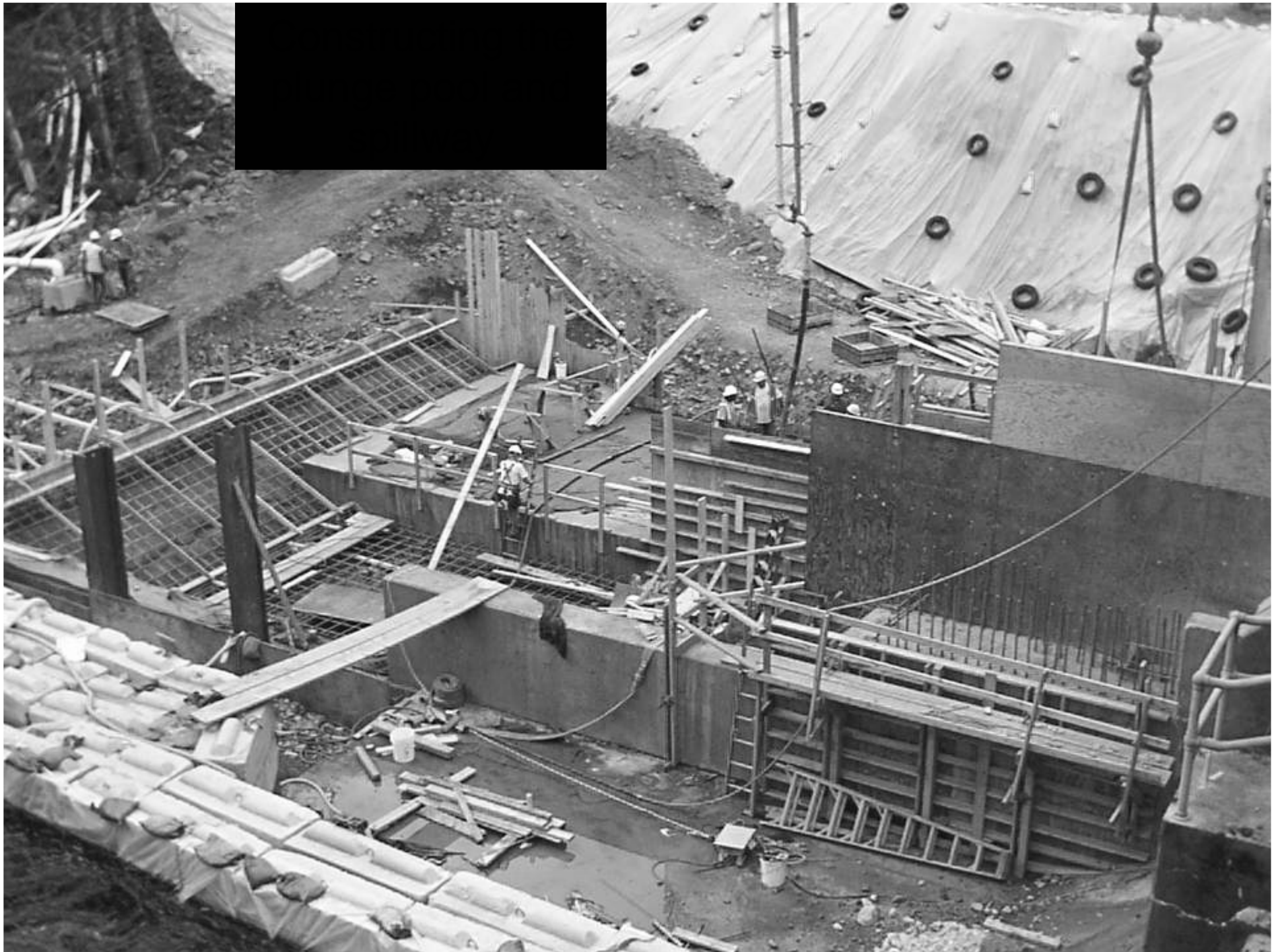
1. New water intake screen
2. Tip out gate and spillway at the dam

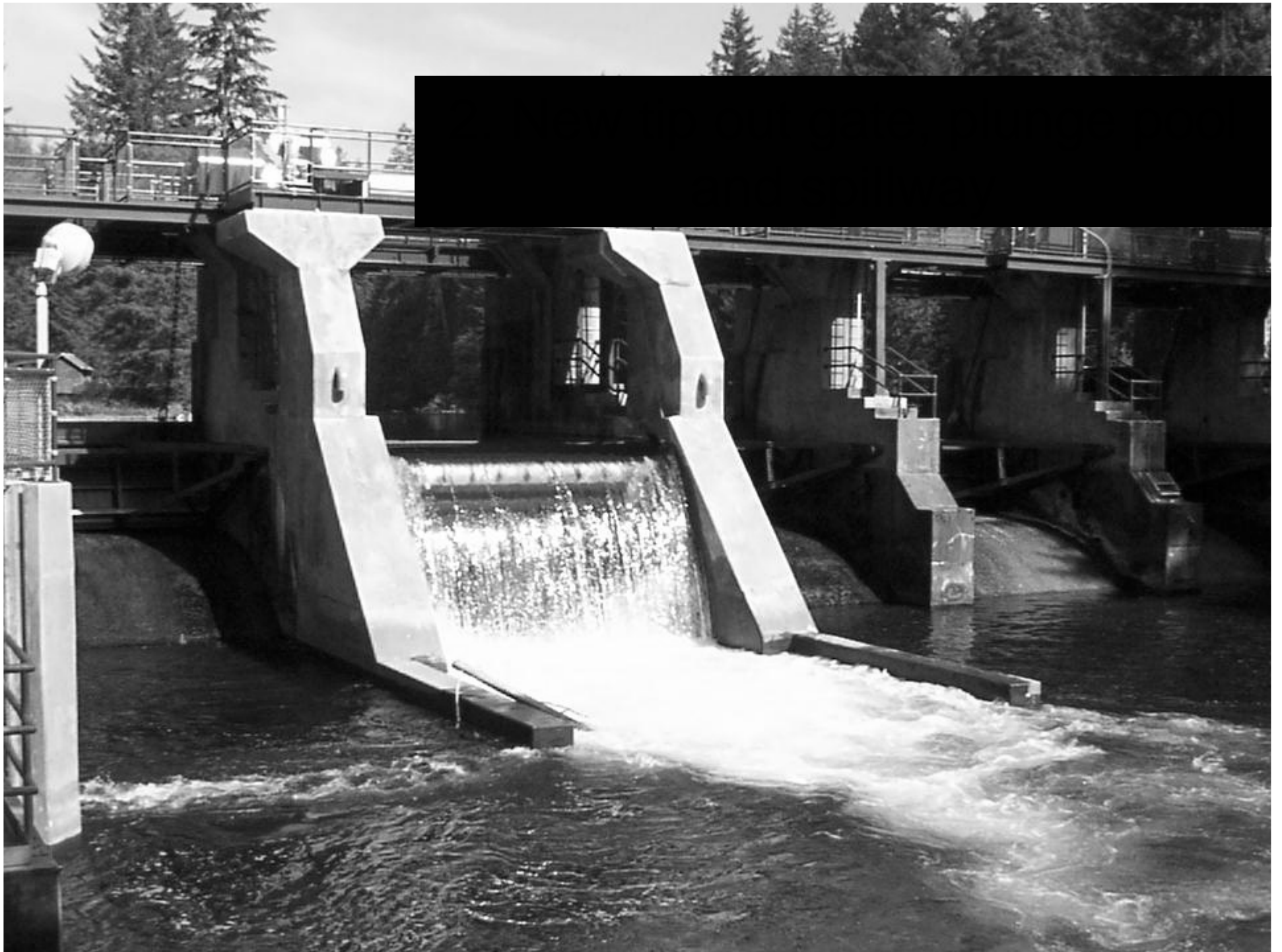
⌘ Upstream passage

3. Passage over the aqueduct using rock drop structures
4. Fish ladder and sorting facilities at Landsburg Dam

1. Landsburg Diversion Intake Screens







3. Landsburg Aqueduct Crossing -completed in 2002



Before



After





4. Landsburg Fish Ladder and Sorting Area



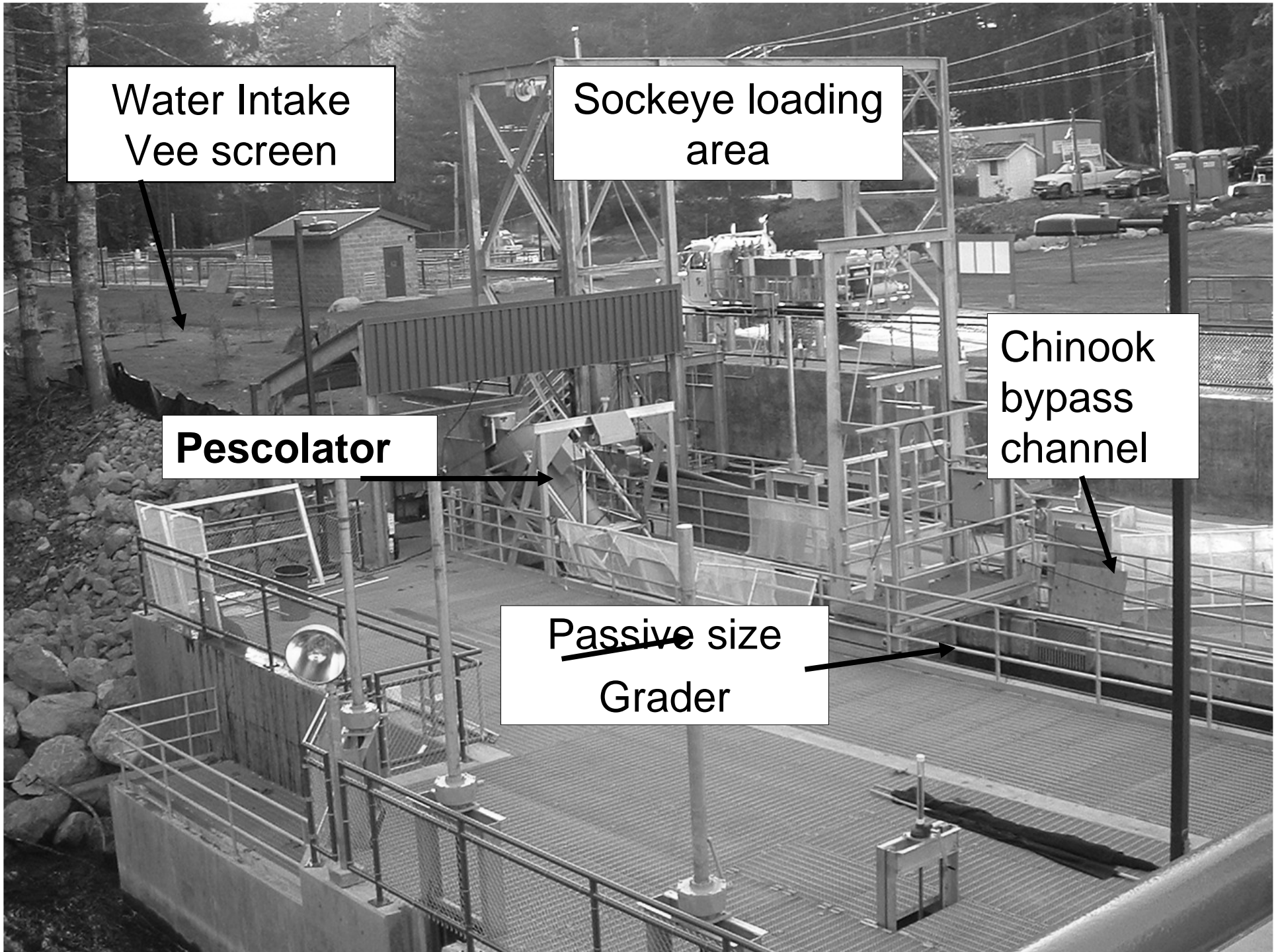
Water Intake
Vee screen

Sockeye loading
area

Pescolator


Chinook
bypass
channel

~~Passive size~~
Grader



Landsburg Fish Passage 2003

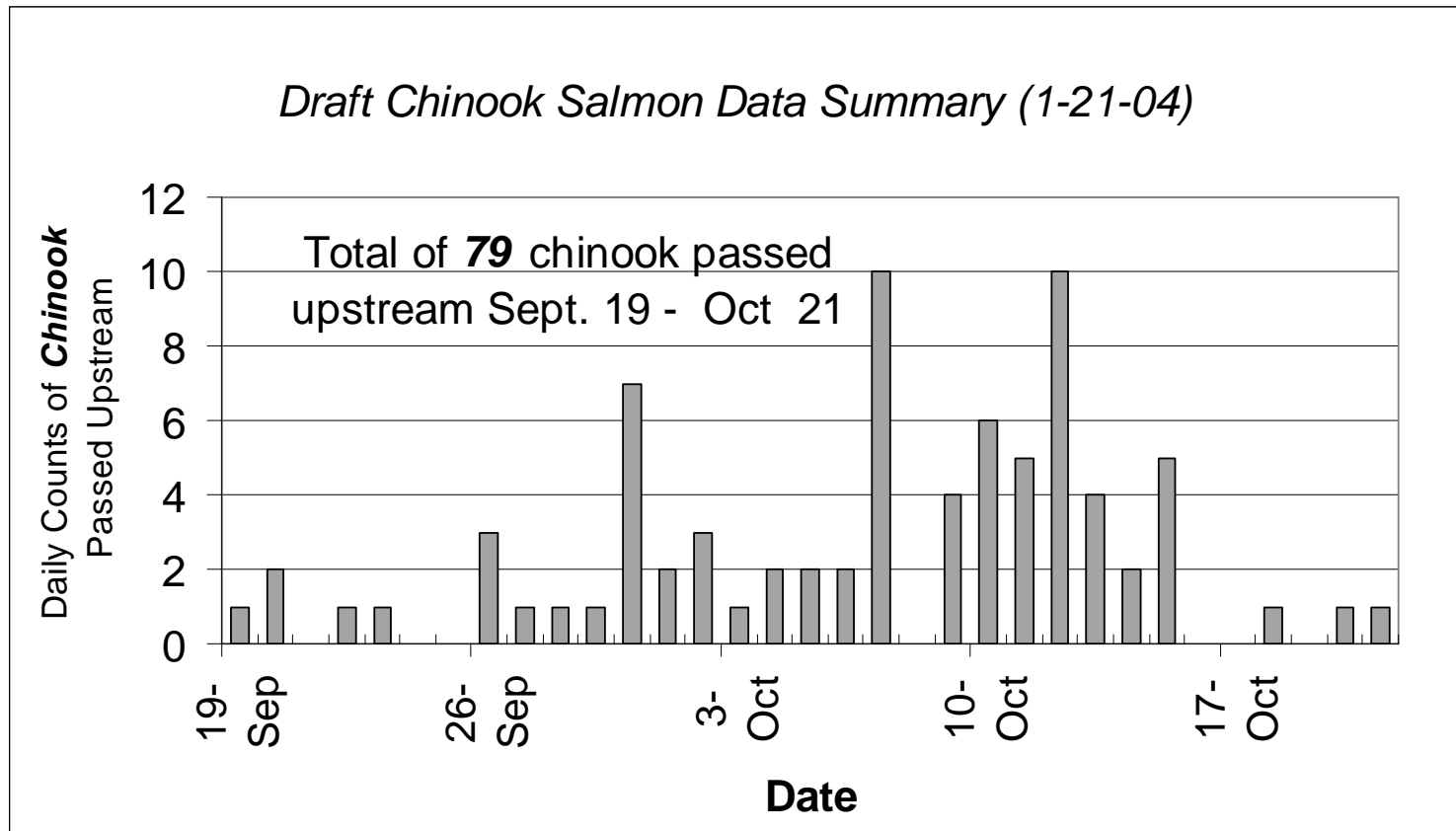
preliminary data as of 01/30/2004



"Lonesome Charlie"




Chinook Passage at Landsburg 2003

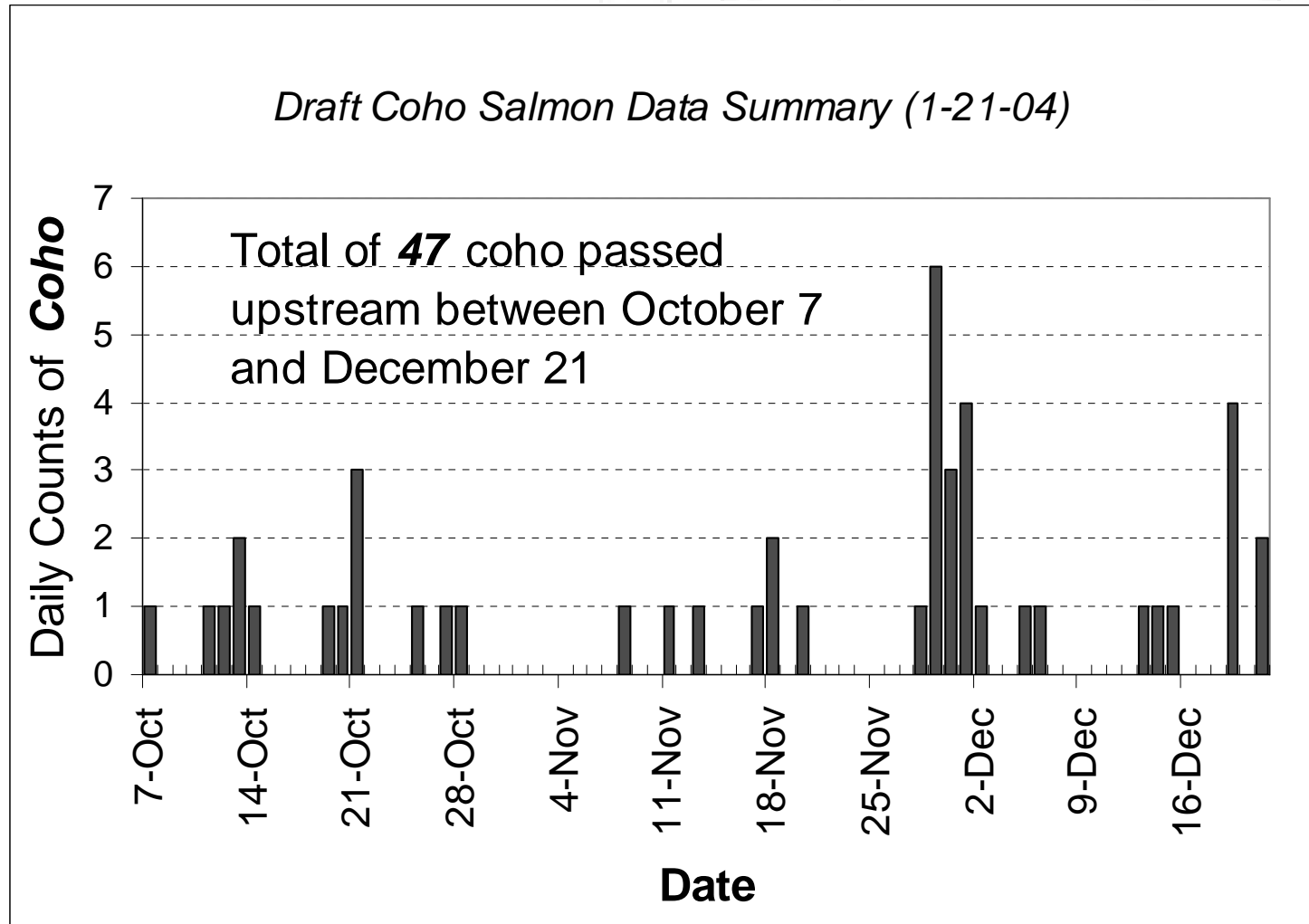


Chinook at Landsburg 2003

preliminary data as of 01/30/2004




Coho Passage at Landsburg 2003



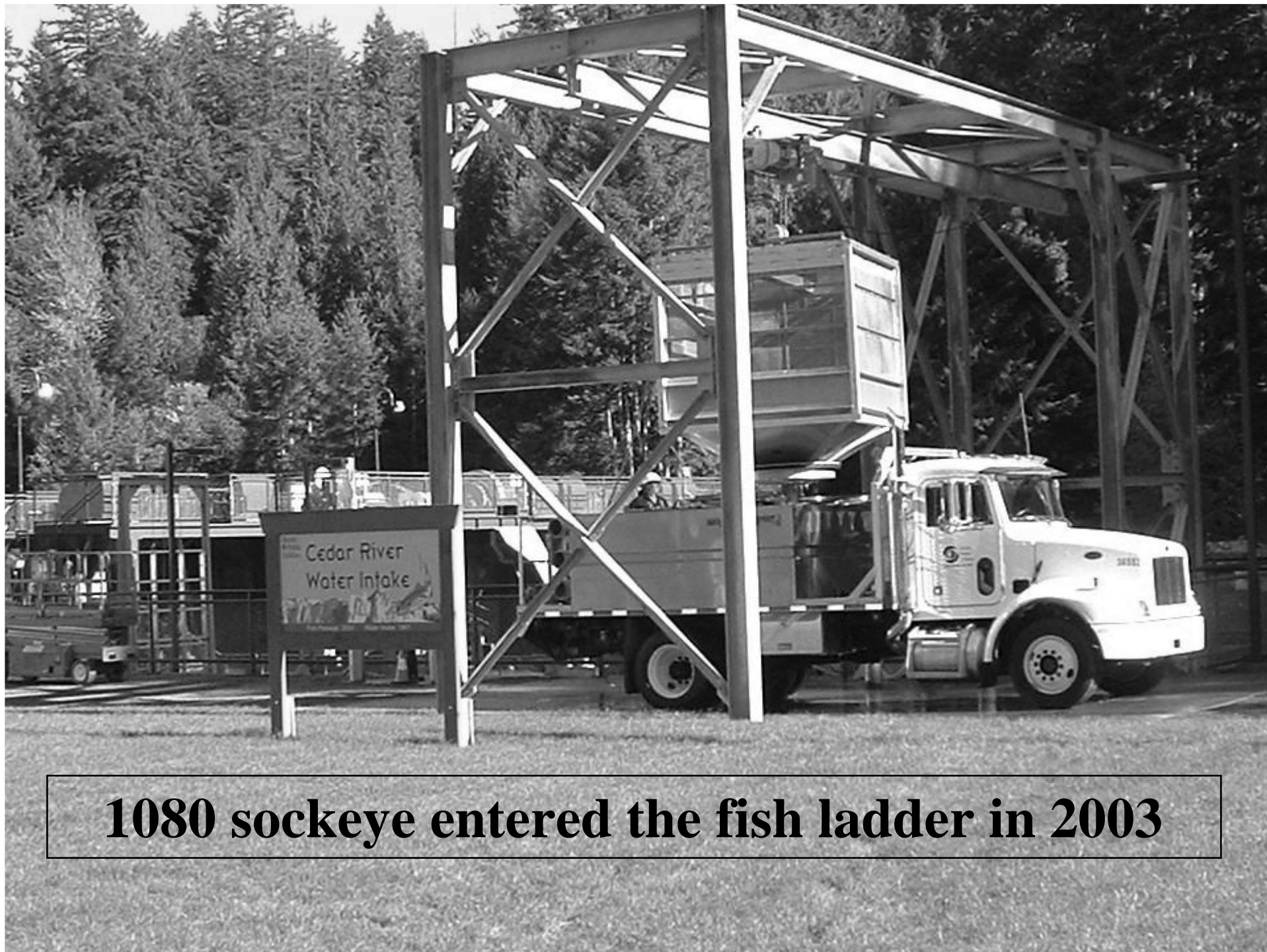
Coho at Landsburg 2003

preliminary data as of 01/30/2004



Sorting Salmon at Landsburg





1080 sockeye entered the fish ladder in 2003

Fish Passage Evaluation 2003

⌘ Data collected at Landsburg

- ☐ species

- ☐ sex

- ☐ length

- ☐ adipose fin \pm

- ☐ tissue for DNA

⌘ Chinook redd surveys above Landsburg

Initiating re-colonization studies with U. of Washington, NOAA Fisheries and WDFW

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- ⌘ Temporal and spatial distribution of spawning fish**
 - ⌘ Reproductive success of re-colonizing fish**
 - ⌘ Juvenile fish interactions with resident fish**
 - ⌘ Effects of nutrients from spawning carcasses on drinking water quality and ecosystem processes**